

IN THE CLAIMS:

Claims 1 and 19 are amended herein. Claims 7 through 18 are cancelled. Claims 23 through 34 are added. All pending claims and their present status are produced below.

1 1. (Currently amended) A system of detecting radio frequency interference and
2 correcting damaged composite video data signal, comprising:
3 a detection unit[[,]] for receiving a composite video signal ~~and for detecting~~ to detect
4 whether interference causes damage to the received composite video data
5 signal and, for identifying a damaged portion of the received composite video
6 data signal; and
7 a correction unit, communicatively coupled ~~to~~ with the detection unit, for correcting
8 the damaged portion of the composite video data signal in response to
9 identification of the damaged portion of the composite video data signal by
10 replacing the damaged portion of the composite video signal with an
11 equivalent portion of video data corresponding to the damaged portion of the
12 composite video signal.

1 2. (Original) The system of claim 1, further comprising:
2 a transmission end for generating the composite video signal and transmitting the
3 composite video signal to the detection unit.

1 3. (Original) The system of claim 2, wherein the transmission end comprises:
2 a video sensor for capturing video image;
3 an encoder, coupled to the video sensor, for converting captured video image into the
4 composite video data signal; and

5 a transmitter, coupled to the encoder, for transmitting composite video data signal to
6 the detection unit.

1 4. (Original) The system of claim 3, wherein the transmission end further comprises:
2 a microphone for recording audio signal and for transmitting audio signal to the
3 transmitter.

1 5. (Original) The system of claim 3, wherein the composite video data signal is a NTSC
2 compliant video signal.

1 6. (Original) The apparatus of claim 3, wherein the composite video data signal is a
2 PAL compliant video signal.

1 7. (Canceled).

1 8. (Canceled).

1 9. (Canceled).

1 10. (Canceled).

1 11. (Canceled).

1 12. (Canceled).

1 13. (Canceled).

1 14. (Canceled).

1 15. (Canceled).

1 16. (Canceled).

1 17. (Canceled).

1 18. (Canceled).

1 19. (Currently amended) A method of detecting external interference within a composite
2 video signal representing a line on a video image, comprising the steps of:
3 receiving the composite video signal;
4 detecting whether a color burst pulse is damaged in the composite video signal; and
5 generating a detection flag in response to the condition of the color burst in the
6 composite video signal;
7 replacing, in response to the detection flag, the color burst pulse that is damaged with
8 an equivalent pulse corresponding to the damaged color burst pulse.

1 20. (Original) The method of claim 19, further comprising:
2 detecting whether a horizontal synchronization pulse is damaged in the composite
3 video signal.

1 21. (Original) A method of correcting corrupted video data which represent a target line
2 on a first video frame to be displayed, comprising the steps of:
3 storing the corrupted video data representing the first video frame and video data
4 representing a second video frame which is temporally closest to the first
5 video frame, the target line on the first video frame having at least one
6 matching line on the second video frame;
7 determining whether a portion of the video data representing the matching line on the
8 second frame is corrupted; and
9 replacing the corrupted video data representing the target line on the first video frame
10 with the video data representing the matching line on the second frame in
11 response to the portion of the video data representing the matching line on the
12 second frame being not corrupted.

1 22. (Original) The method of claim 21, further comprising the steps of:
2 storing a video data representing a third video frame, which is temporally closest to
3 the first video frame, the target line on the first video frame having at least one
4 matching line on the third video frame;
5 determining whether the portion of the video data representing the matching line on
6 the third frame is corrupted in response to the determination of the condition
7 of the portion of the video data representing the matching line on the second
8 video frame; and
9 replacing the corrupted video data representing the target line on the first video frame
10 with the video data representing the matching line on the third video frame in
11 response to the portion of the video data representing the matching line on the
12 third video frame being not corrupted.

1 23. (New) A system of detecting radio frequency interference and correcting a damaged
2 composite video data signal, comprising:
3 a detection unit for receiving a composite video signal, detecting whether interference
4 causes damage to the received composite video data signal, and identifying a
5 damaged portion of the received composite video data signal; and
6 a correction unit, communicatively coupled with the detection unit, for identifying
7 the damaged portion of the composite video data signal for correction,
8 wherein the detection unit further comprises:
9 a receiver module for receiving the composite video data signal,
10 a bad-line detector, coupled to the receiver module, for determining if the
11 composite video data signal is damaged by detecting whether a

12 predetermined portion of the composite video data signal is present
13 and, in response to detecting damage, generating a detection flag to
14 indicate the damaged video data signal,
15 a video decoder, coupled to the receiver module, for converting the composite
16 video data signal into component video data signal, and
17 a line flattener, coupled to the video decoder and the bad-line detector, for
18 receiving the detection flag and modifying a corresponding damaged
19 portion of component video data to a predetermined value.

1 24. (New) The system of claim 23, further comprising a mute control module, coupled to
2 the receiver module and the bad-line detector, for muting audio signals associated
3 with damaged portion of composite video signal in response to receiving the detection
4 flag from the bad-line detector.

1 25. (New) The system of claim 23, further comprising a video compressor, coupled to
2 the line flattener, for compressing the component video data and transmitting to the
3 correction unit.

1 26. (New) The system of claim 23, wherein the bad-line detector further comprises:
2 a filter for receiving the composite video data signal from the receiver module and for
3 outputting the color burst signal of the composite video data signal;
4 a color burst processing module, coupled to the filter, for amplifying and converting
5 the color burst signal into a color burst square wave;
6 a synchronization detector, coupled to the receiver module, for detecting and
7 outputting a horizontal synchronization signal in the composite video data
8 signal; and

9 a logic unit, coupled to the color burst processing module and the synchronization
10 detector, for detecting if the color burst signal and the horizontal
11 synchronization signal have been damaged by interference and for generating
12 the detection flag in response to determination of the damage caused by
13 interference.

1 27. (New) The system of claim 26, wherein the logic unit is further configured to count a
2 number of color burst edges in the color burst square wave.

1 28. (New) The system of claim 26, wherein the logic unit is further configured to detect
2 if the horizontal synchronization signal of each composite video line has a rising edge
3 at a first predetermined time.

1 29. (New) The system of claim 26, wherein the logic unit is further configured to detect
2 if the horizontal synchronization signal of each composite video line has a falling
3 edge at a second predetermined time.

1 30. (New) The system of claim 26, wherein the detection flag is a bad-line flag.

1 31. (New) A system of detecting radio frequency interference and correcting a damaged
2 composite video data signal, comprising:

3 a detection unit for receiving a composite video signal, detecting whether interference
4 causes damage to the received composite video data signal, and identifying a
5 damaged portion of the received composite video data signal; and
6 a correction unit, communicatively coupled with the detection unit, for identifying
7 the damaged portion of the composite video data signal for correction,
8 wherein the correction unit further comprises:

9 a video decompressor, coupled to the detection unit, for storing video data
10 corresponding to the composite video data signal and for
11 decompressing the stored video data wherein the stored video data
12 correspond to video frames,
13 a bad-line logic, coupled to the video compressor, for identifying the damaged
14 portion in the stored video data, the damaged portion being detected
15 and marked by the detection unit, and
16 a bad-line replacement module, coupled to the video decompressor and the
17 bad-line logic, for replacing damaged portion in the stored video data
18 with good video data.

1 32. (New) The system of claim 31, further comprising:

2 an audio stream assembly, coupled to the detection unit, for transferring audio signals
3 in the composite video data signal;
4 an audio delay module, coupled to the audio stream assembly, for delaying audio
5 signals; and
6 an audio driver backend, coupled to the audio delay module, for transferring delayed
7 audio signals to an audio processing module.

1 33. (New) The system of claim 31, further comprising a video driver backend, coupled to
2 the bad-line replacement module, for transferring repaired video data to a video
3 application processing module.

1 34. (New) The system of claim 31, wherein the bad-line replacement module comprises:
2 a plurality of buffers for storing the video data;

3 an input multiplexer, coupled to each of the plurality of buffers, for receiving the
4 video data and selecting one of the plurality of the buffers to store video data
5 corresponding to one video frame; and
6 an output multiplexer, coupled to each of the plurality of buffers, for selecting one of
7 the plurality of the buffers to output video data corresponding to one video
8 frame.